Name:

at1110paper_practice_test (v120)

1. Solve the equation with factoring by grouping.

$$10x^2 + 15x - 12x - 18 = 0$$

$$(5x - 6)(2x + 3) = 0$$

$$x = \frac{6}{5} \qquad x = \frac{-3}{2}$$

2. Solve the equation.

$$(6x - 5)(7x + 3) = 0$$

$$x = \frac{5}{6} \qquad x = \frac{-3}{7}$$

3. Factor the expression.

$$x^2 + 2x - 48$$

$$(x - 6)(x + 8)$$

4. Factor the expression.

$$49x^2 - 36$$

$$(7x - 6)(7x + 6)$$

5. Expand the following expression into standard form.

$$(4x + 9)(3x - 8)$$

$$12x^2 - 32x + 27x - 72$$
$$12x^2 - 5x - 72$$

6. Expand the following expression into standard form.

$$(5x - 7)(5x + 7)$$

$$25x^2 + 35x - 35x - 49$$
$$25x^2 - 49$$

7. Solve the equation.

$$9x^2 - 9x + 12 \;=\; 4x^2 + 5x + 3$$

$$5x^2 - 14x + 9 = 0$$
$$(5x - 9)(x - 1) = 0$$
$$x = \frac{9}{5} \qquad x = 1$$

8. Expand the following expression into standard form.

$$(3x - 8)^2$$

$$9x^2 - 24x - 24x + 64$$
$$9x^2 - 48x + 64$$